

Applied Technology Council Overview



28 April 2004

Patrick Gould

Air Force Research Laboratory



Overview



- **Air Force Research Laboratory**
 - **Video** 
- **Applied Technology Councils**
 - **The Challenge and Solution**
 - **Advanced Technology Demonstrations**
 - **Two Examples**
 - **ATC Results**



Air Force Research Laboratory



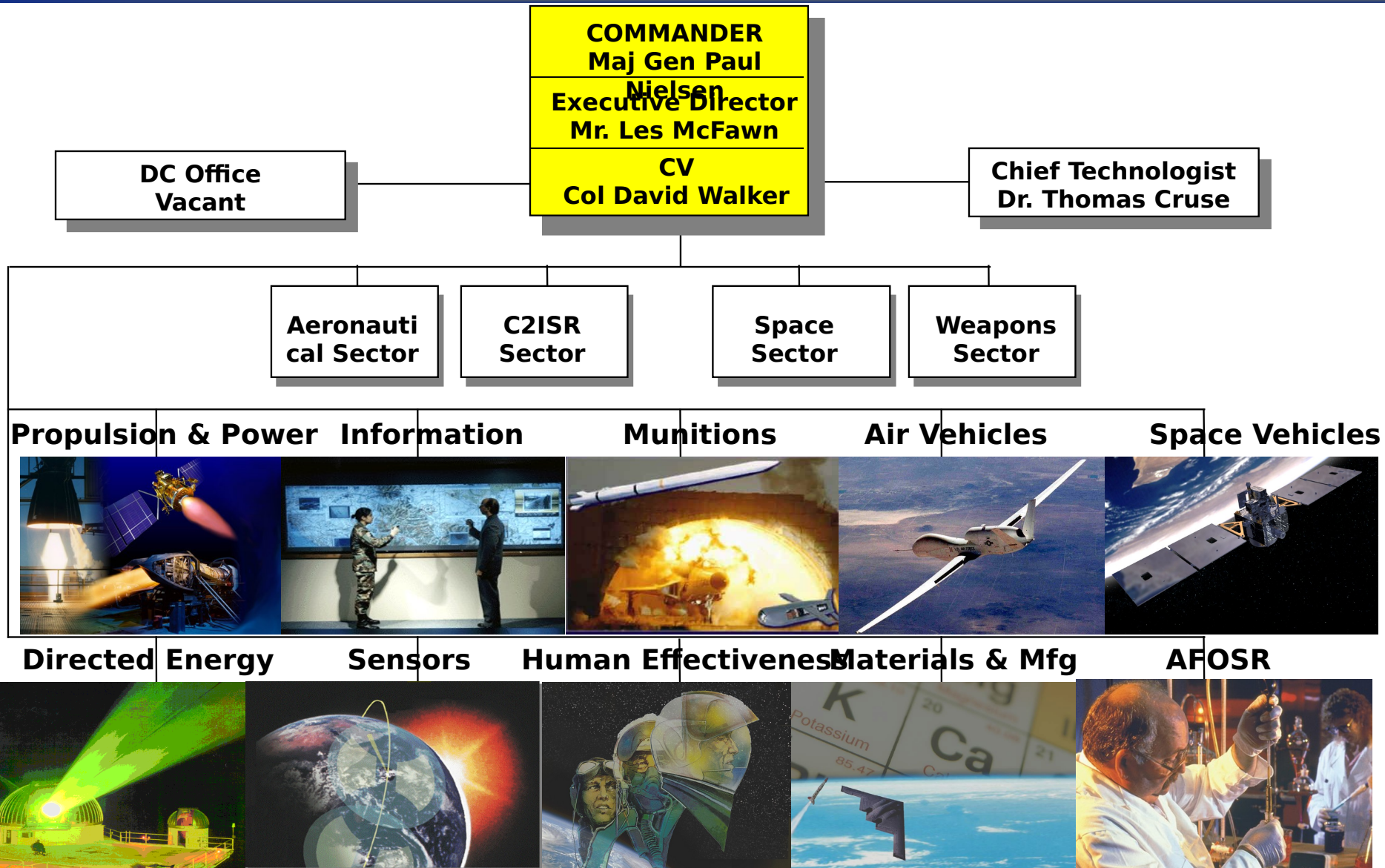
***From
many
labs and
staffs***



***...To the Air Force's
Single Laboratory***



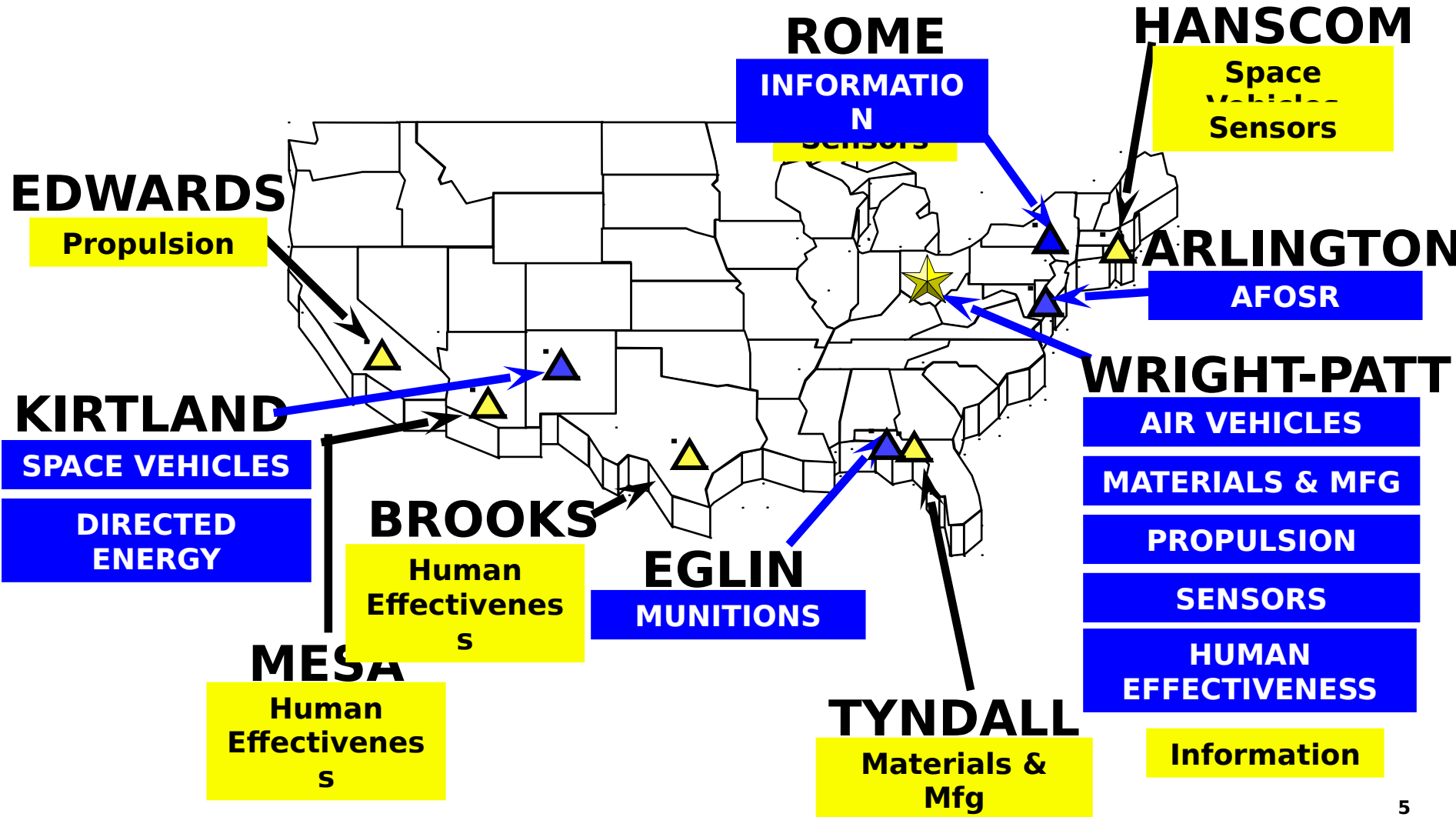
Air Force Research Laboratory Organization Structure



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AFRL Research Sites

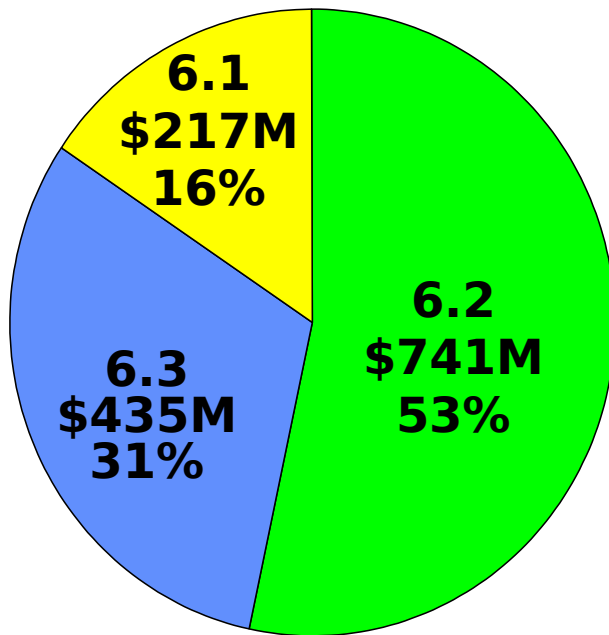




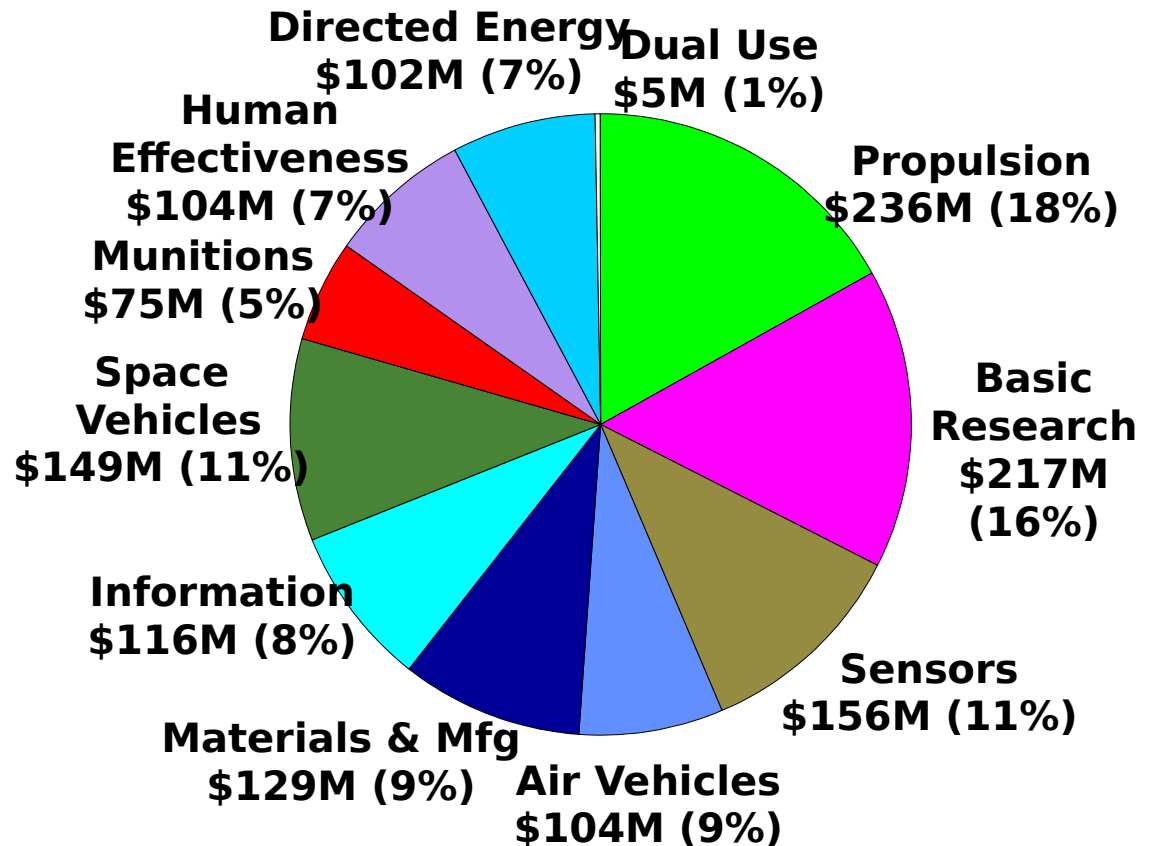
FY05 President's Budget AF S&T Budget



**By
Budget Activity**



**By
Directorate/Tech Area**



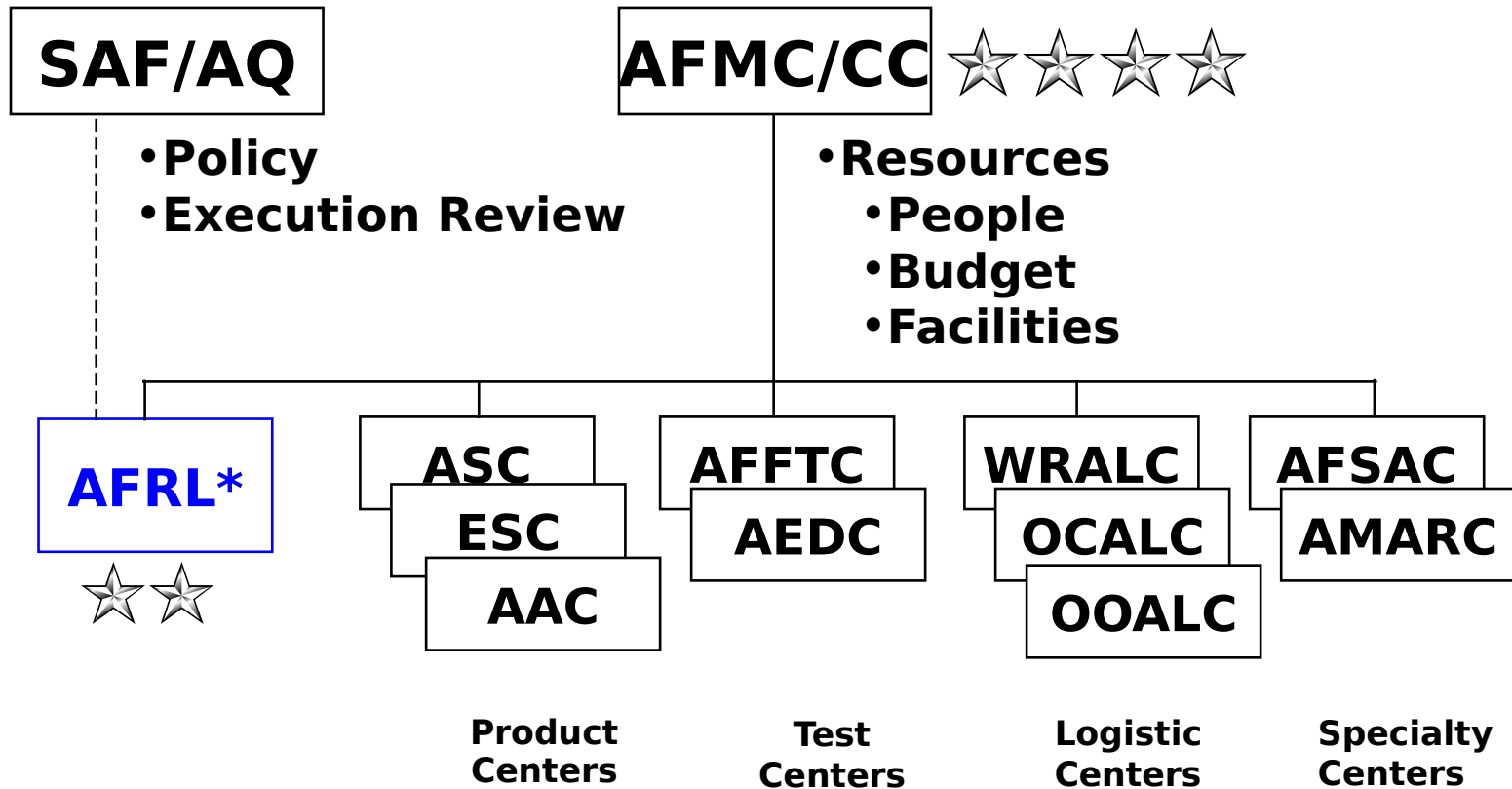
TOTAL: \$1.393 Billion

Values May Not Add Due to Rounding

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Air Force Research Laboratory



***AFRL/CC is dual-hatted as TEO reporting to Secretary of the Air Force for Acquisition (SAF/AQ)**



Operating Tenets



- **Outsource majority of research/tech development to industry and academia**
- **Perform focused in-house research to maintain core expertise and be a smart outsourcer**
- **Balance near term transition and far term research**
- **Collaborate/coordinate with others**
 - **DoD: Army, Navy, DARPA, DTRA, BMDO, NRO**
 - **Other federal agencies: NASA, DOE, others**
 - **Private sector**
 - **International**



Technology has been the cornerstone of the Air Force's military successes in the last fifty years



**Low
Observables**



**Global
Communications**



**Smart
Munitions**



**Precision
Navigation**



**Airborne
Command And
Control**



**Battlefield
Management**

**Operation
Allied Force**



**Products
of War**



AFRL Supports Major Programs



Global HawkFOR OFFICIAL USE ONLY C-5 AMP



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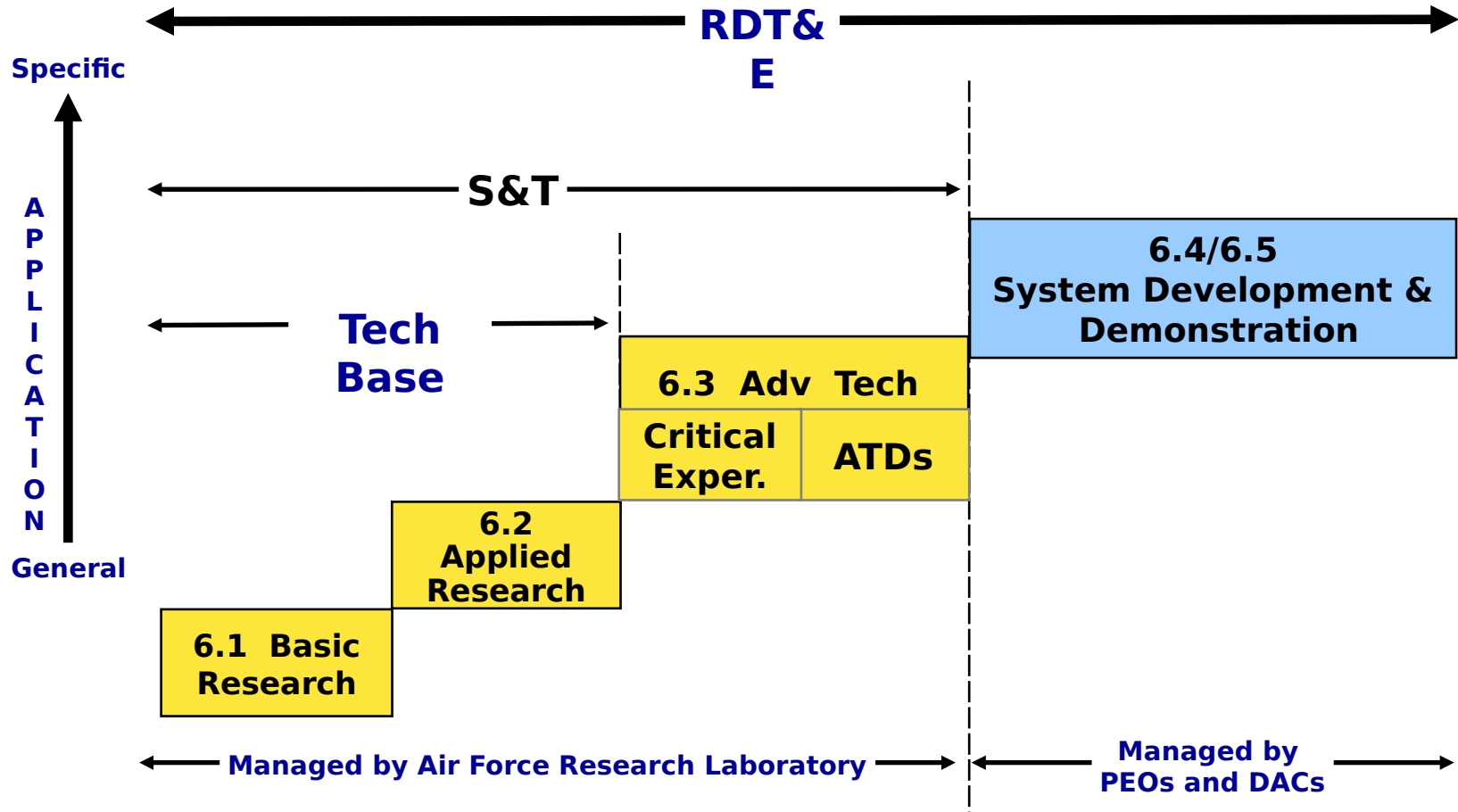
Our Challenge



- **Tech Transition Problem Surfaced at Quarterly Acquisition Program Reviews (QAPRs)**
 - **Funding Disconnect Between S&T (Funded) and Transition Programs (Largely Unfunded)**
- **Applied Technology Councils (ATCs) Proposed As a Solution**



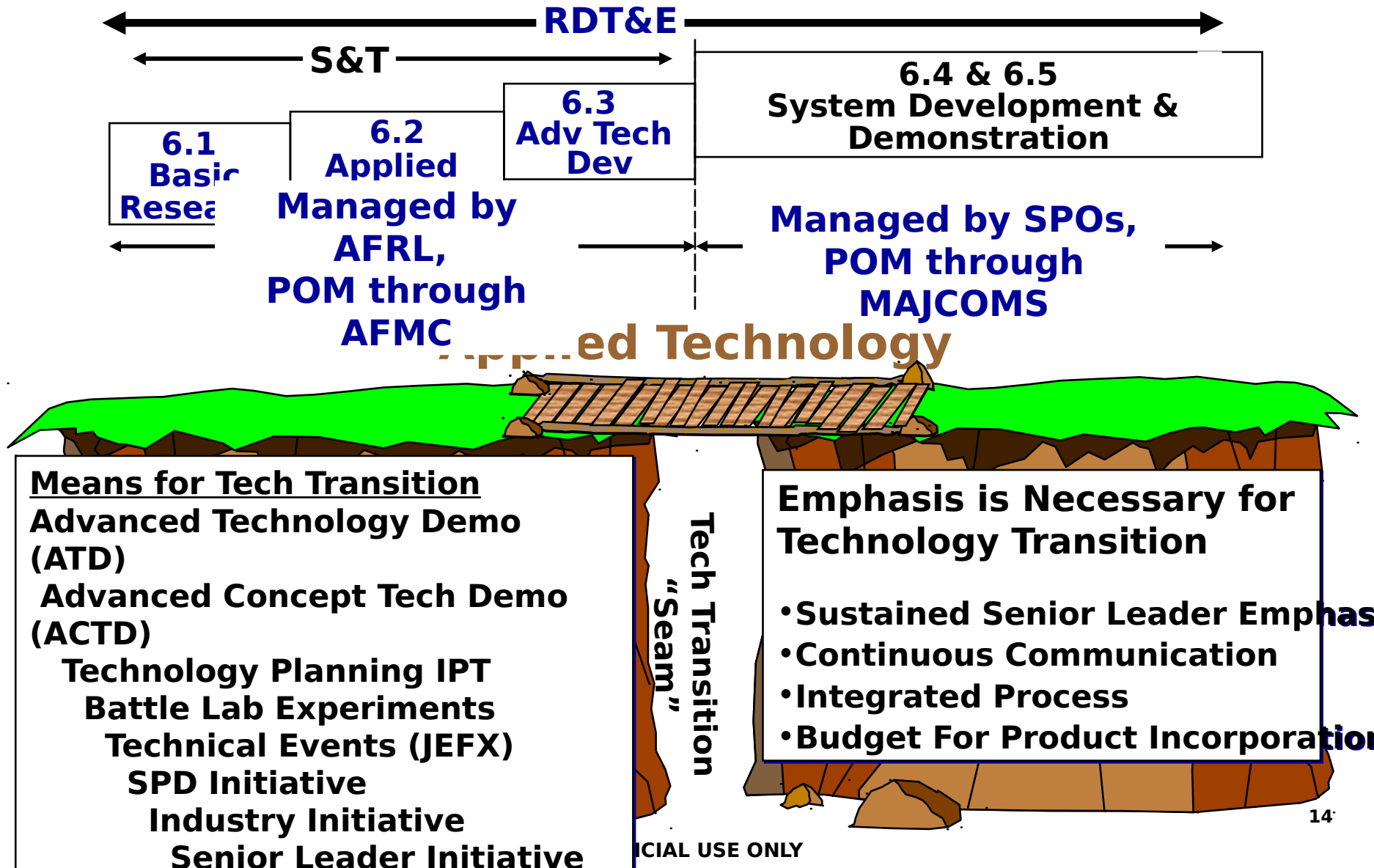
Major Force Program 6 Relationship (3600 Appropriation)



6.3 a & b funding was abolished in 1992

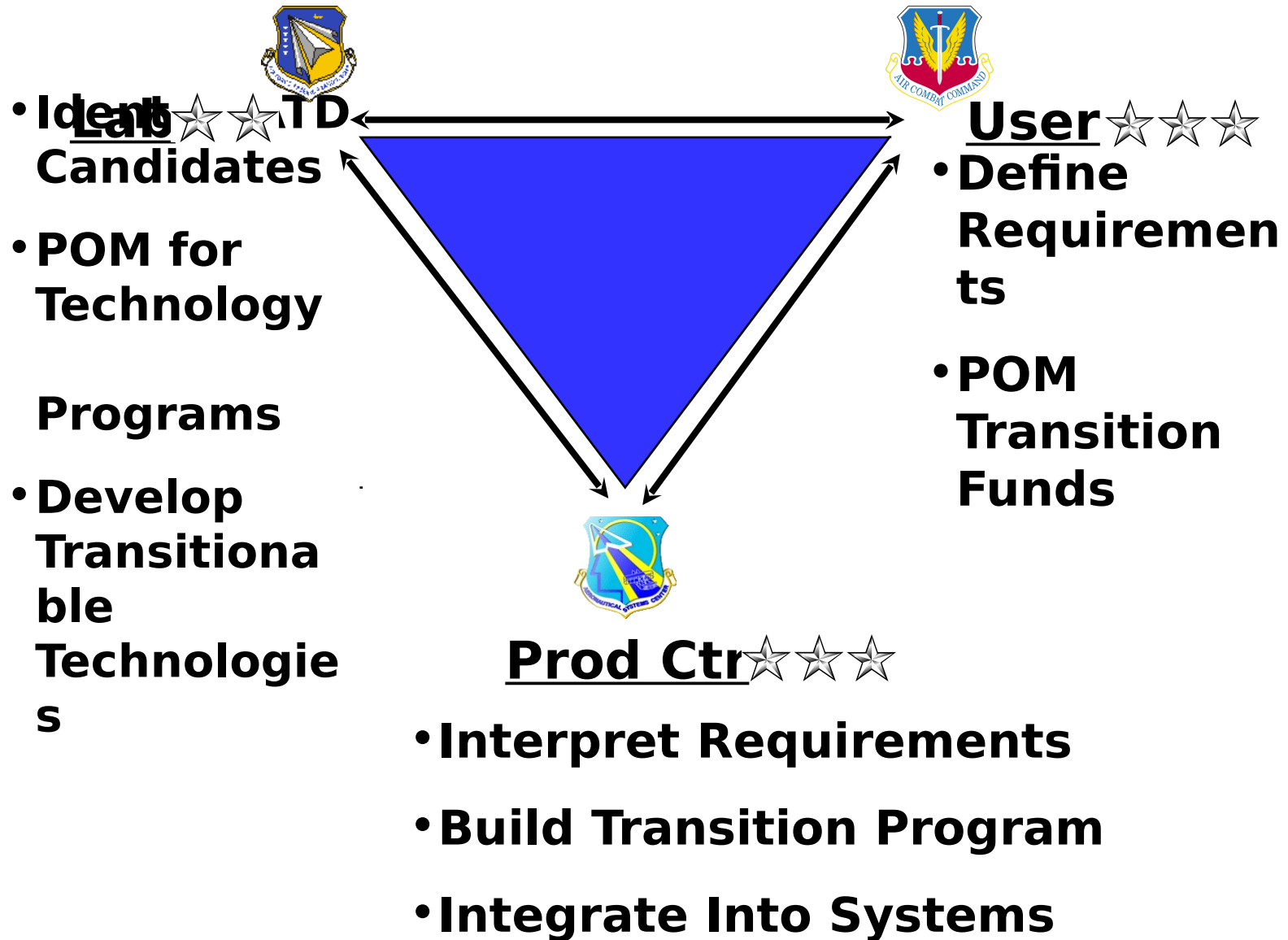


Applied Technology Councils Focus S&T Investment





The ATC Triangle





Desired Outcome of the ATC Process



- **Increase Probability of Timely Tech Transition**
 - **Lab**: Goal - 50% of S&T 6.3 Budget in ATDs
 - **Warfighter**: No ATD Commissioned w/o Budget

Commitment to Transition

- **SPO**: Build and Implement Successful Transition

Program

- **Build Greater Understanding of “Realm of the**

Successful Tech Transition is the End Game

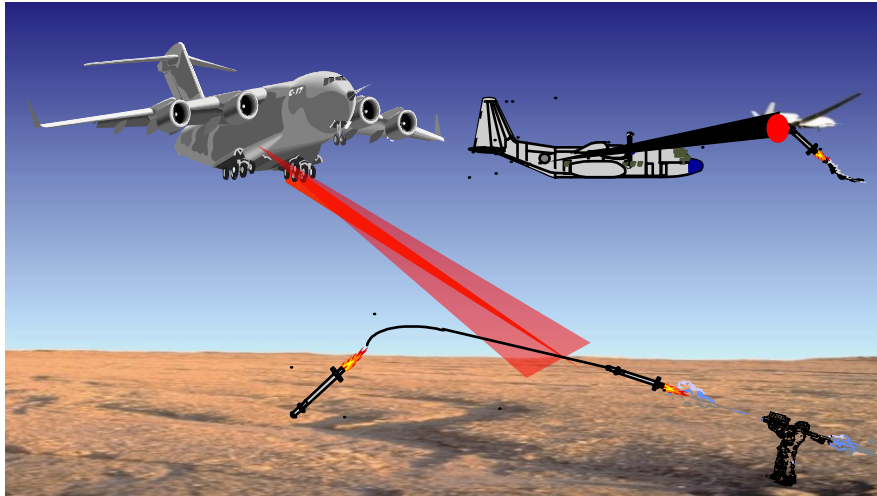
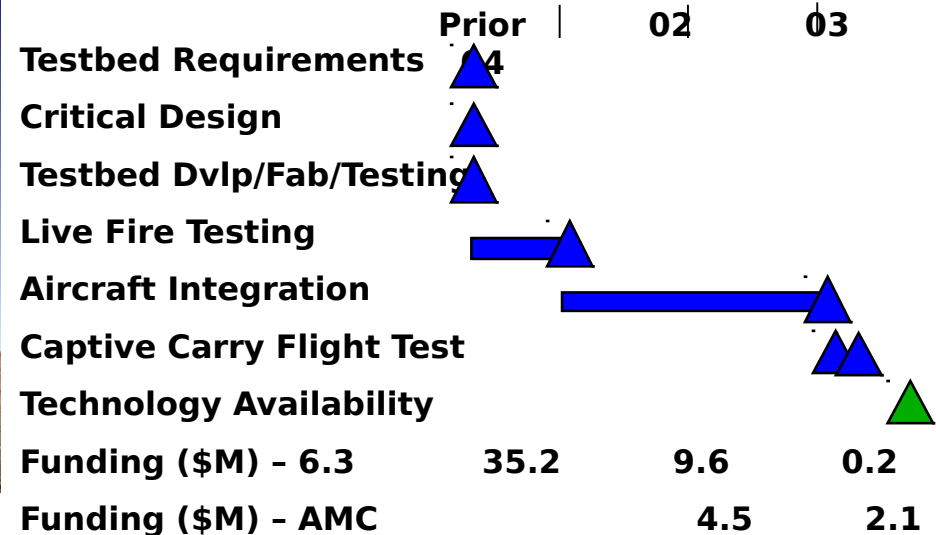


ATD Candidates

- **What is an ATD Candidate for an Applied Technology Council?**
 - **Any Funded 6.3 Program* That Is Projected to Demonstrate an Integrated Set of Technologies That Will**
 - **Enable an Improved Warfighting Capability/System, and**
 - **Be Ready to Transition Within the FYDP**
- * **Programs can include 6.2 and 7.8 (ManTech) Funds**



Laser Infrared Flyout Experiment (LIFE)

AFRL/SN**Technology Investment Schedule (FY) As of 13**

Description	Benefits to the War Fighter
<ul style="list-style-type: none">Threat adaptable deceptive jamming of inbound IR missilesProof of concept live fire and flight testAffordability pilot program - lower risk	<ul style="list-style-type: none">Threat adaptable jamming defeats both known & new IR threats, including those with flare CMsProvides missile launch detection out to maximum range of the missile with few false alarmsMini-head turret minimizes size/weight/power
Technology	
<ul style="list-style-type: none">Closed loop jamming with multi-band lasers, mini-turrets, and two color IR missile warningAnalysis of mini-turret option for EMD	<ul style="list-style-type: none">Affordability efforts reduce cost to deploy



Laser Infrared Flyout Experiment (LIFE) Cable Car Demonstration



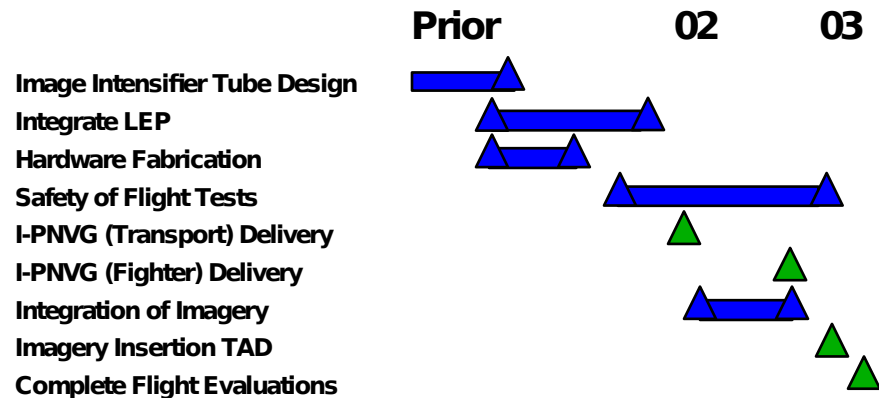
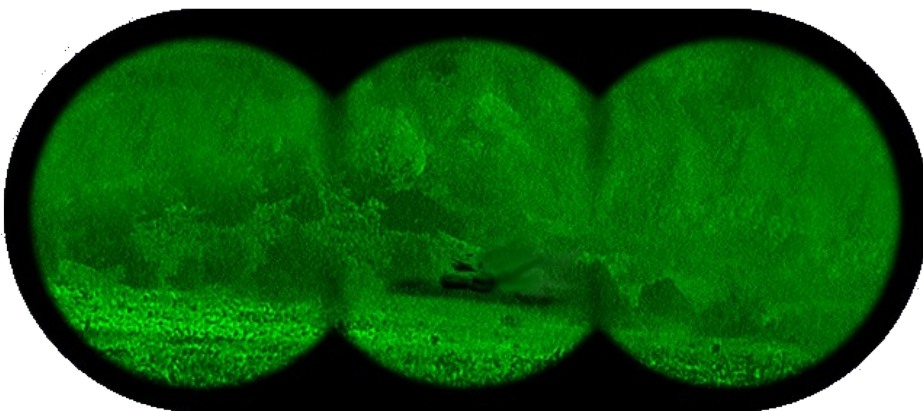
T15a_LP4_Vic_Wet_4Oct



Integrated Panoramic Night Vision Goggle (IPNVG)

AFRL/HE/ML

Technology Investment Schedule (FY) As of: 20 Aug 02



6.3 Funding (\$M)

9.8

3.1

2.0

Army

2.9

1.0

Description

- Develop integrated technology leveraged from panoramic night vision goggle and aircrew laser eye protection technologies
- Technologies compatible with J HMCS design

Technology

- Ultra-Wide Field-of-View (95° Horizontal)
- Low Profile with Improved Center-of-Gravity
- High Performance Laser Filters
- Integration of Imagery Display

Benefits to the Warfighter

- Dramatic increase in viewing area providing unsurpassed situational awareness
- Protection from lasers (self and threats)
- Goggle retained after ejection for escape & evasion
- Improved navigation, targeting, weapons delivery, and search and rescue at night
- Capable to display imagery and symbology
- Allow advanced tactics at night

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Integrated Panoramic Night Vision Goggle (IPNVG) Flight Test Debrief

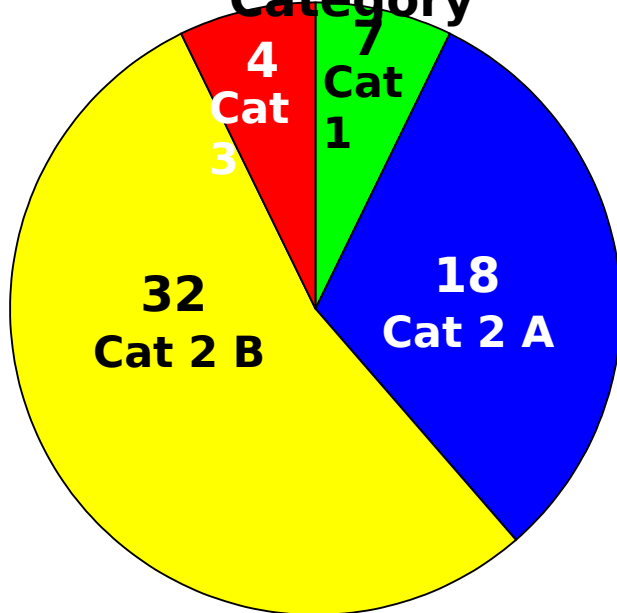




ATC Results Round 1 vs. Current

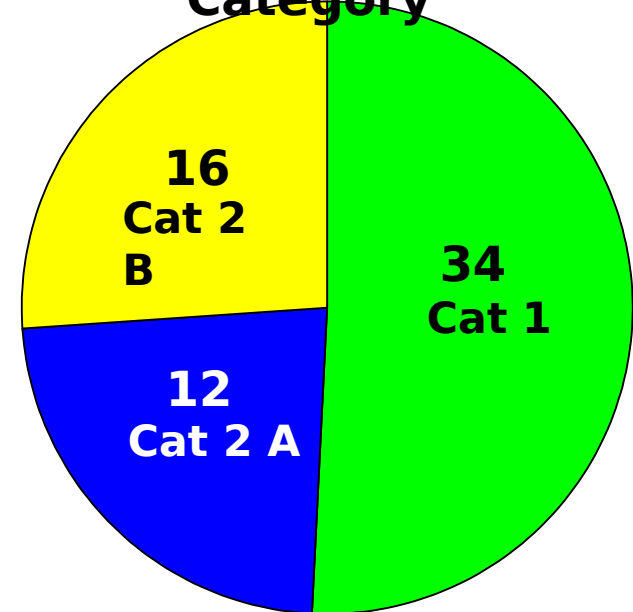


Round 1 (Spring '00)
Commissioned ATDs by Category



- 57 ATDs Commissioned
- 12% (7 / 57) w/ MAJCOM Transition Funds
- AFRL Funding Comm **• 18% of 6.3 Funds**
 - \$87.1M FY00
 - \$530.5M FY00-07

Current
Commissioned ATDs by Category

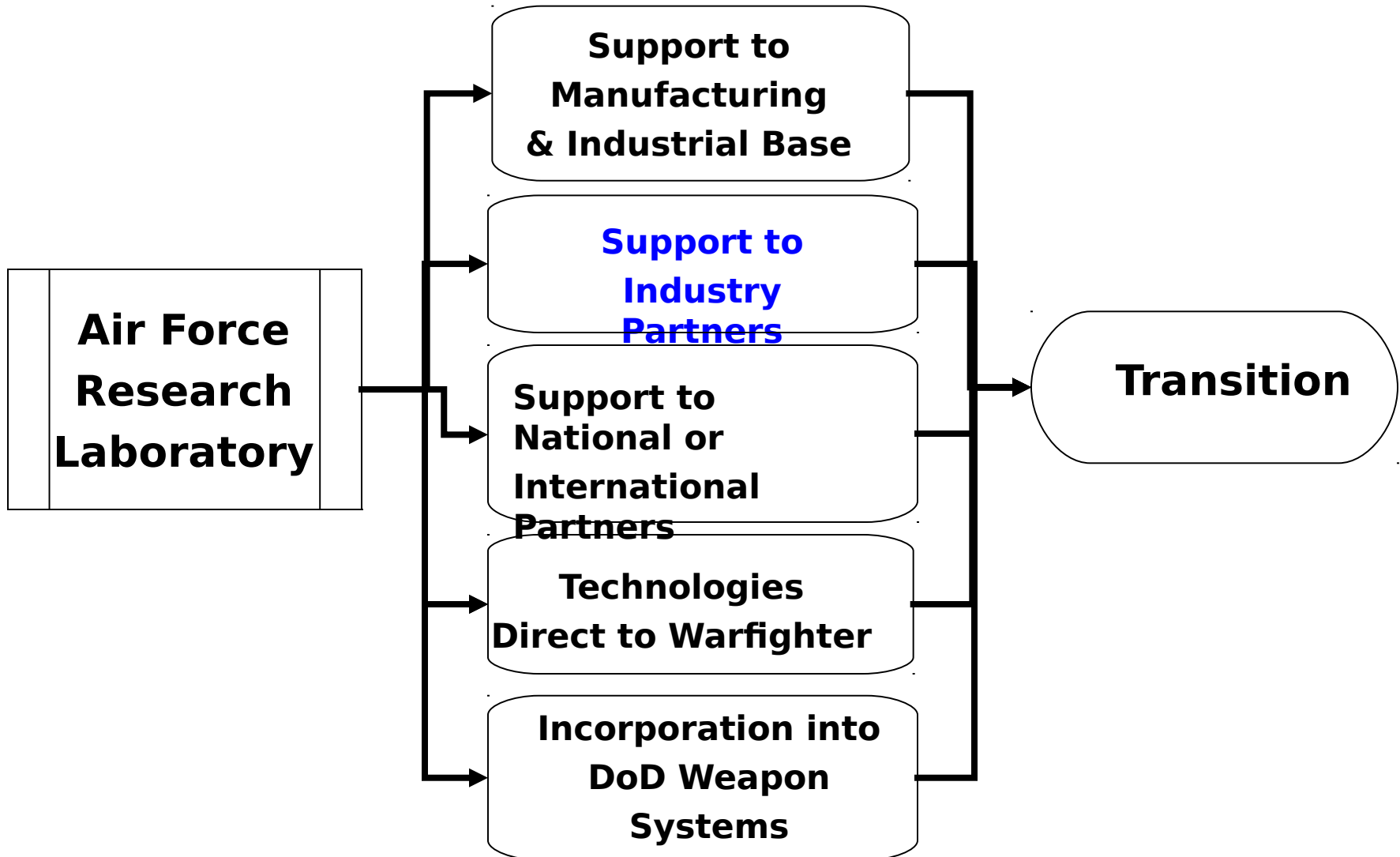


- 62 ATDs Commissioned
- 55% (34/62) w/ MAJCOM Transition Funds
- AFRL Funding Comm **• 50 % of 6.3 Funds**
 - \$225.8M FY03
 - \$628.5M FY03-09

As of Jan 03



Other Technology Transition Paths





Summary



- **AFRL committed to timely tech transition**
 - **ATC's are a prime forum**
- **Many successful technology transition paths other than the ATC process**

Successful Tech Transition is the End Game



Closing Thought



**AFRL unleashing the power
of innovative air and space technology!**





QUESTIONS
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Reference Charts





Technology Readiness Assessment

